



Colorado Department
of Public Health
and Environment

**AUTHORIZATION TO DISCHARGE UNDER THE
COLORADO DISCHARGE PERMIT SYSTEM**

In accordance with the provisions of the Colorado Water Quality Control Act, (25 8 101 et seq., C.R.S., 1973 as amended)

MURPHY-BROWN, LLC

is authorized to apply swine feeding process wastewater and residual solids to the sites identified in Part I.A.1.ii) of this permit in accordance with the requirements and conditions set forth in Parts I and II hereof, and to discharge to surface waters in accordance with Part I.A.2., of this permit. All application of swine feeding process wastewater and residual solids authorized herein shall be consistent with the terms and conditions of this permit.

The applicant may demand an adjudicatory hearing within 30 days of the issuance of the final permit determination, per Colorado Water Quality Control Commission Regulation No. 61, Colorado Discharge Permit System Regulations, 5 CCR 1002-61, (Regulation No. 61), section 61.7(1). Should the applicant choose to contest any of the limitations on swine feeding process wastewater application or residual solids application, monitoring requirements or other conditions contained herein, the applicant must comply with Section §24 4 104 C.R.S. and Regulation No. 61. Failure to contest any such limitation, monitoring requirement, or other condition, constitutes consent to the condition by the Applicant.

This permit and the authorization to discharge shall expire at midnight, **January XX, 2020**

Issued and Signed this XX day of XX, 2014

COLORADO DEPARTMENT OF PUBLIC HEALTH AND ENVIRONMENT

Sean Scott, Deputy Director
Division of Environmental Health and Sustainability

SIGNED AND ISSUED:
EFFECTIVE DATE:

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PART I

A. COVERAGE UNDER THIS PERMIT

1. Authority to Apply Process Wastewater and Residual Solids

Beginning no later than the effective date of this permit and, unless revoked and reissued, lasting through the expiration date of this permit, the permittee is authorized to apply swine feeding process wastewater and residual solids generated by the units identified below to the application sites identified in Part I.A.1.b) below. The facilities and land application sites are shown in Figures 1 through 44 of this permit.

a) Operation Units:

Unit	Capacity	Legal Description					GPS Location	
		¼ ¼	Section	Township	Range	County	Latitude	Longitude
Seedorf Complex								
Seedorf 101 & 102	3,754	SW, NE	21	1S	48W	Yuma	39°57'13"	102°45'10"
Horizon – Farm 103	2,934	NW, SE	19	1S	48W	Yuma	39°56'58"	102°47'12"
Sandhill – Farm 105	5,856	SW, NW	29	1S	48W	Yuma	39°56'22"	102°46'49"
Horseshoe – Farm 107							39°56'15"	102°46'50"
Hunter Finisher	8,448	SW, SE	21	1S	48W	Yuma	39°56'52"	102°45'9"
Anchor Finisher	7,200		31	1S	48W	Yuma	39°55'36"	102°47'53"
Big Sky Nursery	30,840	SE, SE	30	1S	48W	Yuma	39°56'0"	102°47'19"
Stulp Complex								
Stulp Sow Farm 109	3,899	SE, NE	32	1S	47W	Yuma	39°55'35"	102°39'17"
Stulp Grow/Finish Farm 302	8,448	NE, SE	32	1S	47W	Yuma	39°55'16"	102°39'23"
Winger Grow Finish	16,896	SE, SE	5	3S	47W	Yuma	39°49'0"	102°39'13"
Badger Grow/Finish Site	25,344		28	1S	46W	Yuma	39°55'56"	102°32'6"
Hilltop Grow/Finish Site	25,344		21	1N	47W	Yuma	40°2'27"	102°37'42"
Prairie View Sow	3,322	NE SW	9	1S	46W	Yuma	39°58'53"	102°32'04"
Wilke Gilt Farm/Nursery Farm	8,400	NE NE	13	1S	47W	Yuma	39°58'24"	102°34'52"
Sunrise-Farm 111	2,750	NE SE	19	3N	46W	Yuma	40°12'45"	102°32'56"
Pheasant Run- Farm 112	2,488	SW SW	1	2N	46W	Yuma	40°9'48"	102°35'57"

[illegible]

b) Land Application Sites: All Units are permitted to use the land applications sites listed below.

Site Designation	Acreage	Legal Description					GPS Location	
		¼	Section	Township	Range	County	Latitude	Longitude
Seedorf 2	210		30/31	1S	48W	Yuma	39°55'48"	102°47'42"
Seedorf 3	250	N 1/2	30	1S	48W	Yuma	39°56'25"	102°47'31"
Seedorf 4	200	N 1/2	19	1S	48W	Yuma	39°57'16"	102°47'28"
Seedorf 6	260	N 1/2	28	1S	48W	Yuma	39°56'19"	102°45'27"
Stulp 32	130		32	1S	47W	Yuma	39°55'43"	102°39'44"
Mitchell	130	SE	29	1S	46W	Yuma	39°56'8"	102°32'37"
McPherson #1	130		28	1S	46W	Yuma	39°56'24"	102°32'7"
McPherson #2	130	NE	28	1S	46W	Yuma	39°56'37"	102°31'36"
McPherson #4	130	NE	29	1S	46W	Yuma	39°56'36"	102°32'40"
Roth #1	130	SW	15	1N	47W	Yuma	40°3'0"	102°37'10"
Roth #2	130	NW	21	1N	47W	Yuma	40°2'33"	102°38'52"
Roth #3	130	NE	20	1N	47W	Yuma	40°2'33"	102°38'52"
Winger #1	130	NE	5	3S	47W	Yuma	39°49'37"	102°39'21"
Winger #2	130	SW	4	3S	47W	Yuma	40°49'11"	102°38'47"
Winger #3	130	NE	4	3S	47W	Yuma	40°49'11"	102°38'14"
Field 19	120	SW	18	1S	48W	Yuma	40°12'45"	102°32'56"
Field 20	120	SE	18	1S	48W	Yuma	40°12'45"	102°32'56"
Field 2	120	SE	11	2N	47W	Yuma	40°9'10"	102°35'26"
Field 3	120	NE	11	2N	47W	Yuma	40°9'30"	102°35'26"
Field 4	250		16	1S	47W	Yuma	39°58'0"	102°38'30"
Field 5	120	NE	18	1S	47W	Yuma	39°58'16"	102°40'35"
Field 6	120	SE	7	1S	47W	Yuma	39°59'39"	102°40'35"
Field 8	120	SE	7	3N	46W	Yuma	40°14'20"	102°33'7"
Field 9	120	NE	7	3N	46W	Yuma	40°14'45"	102°33'7"
Field 10	120	NW	21	3N	47W	Yuma	40°13'0"	102°38'15"
Field 11	120	NW	7	1S	47W	Yuma	39°59'8"	102°41'10"
Field 12	120	SW	6	1S	47W	Yuma	39°59'34"	102°41'10"
Field 14	120	SW	19	3N	46W	Yuma	40°12'35"	102°32'40"

Site Designation	Acreage	Legal Description					GPS Location	
		¼	Section	Township	Range	County	Latitude	Longitude
Field 15	120	NW	19	3N	48W	Yuma	40°13'0"	102°32'40"
Field 21	160	SE	36	1N	48W	Yuma	40°00'23"	102°41'7"
Field 22	250		11/14	1S	47W	Yuma	39°58'26"	102°36'24"
Field 23	160	NE	14	3N	47W	Yuma	40°13'53"	102°36'25"
Trautman	120	SW	19	1N	46W	Yuma	40°2'9"	102°33'45"
Field 31-W	100	SW	9	1S	46W	Yuma	39°58'44"	102°32'13"
Field 32-W	100	NE	13	1S	47W	Yuma	39°58'02"	102°35'22"
Field 33-W	760		9/10	1S	46W	Yuma	39°58'57"	102°30'49"
Field 34-W	480		10/15	1S	46W	Yuma	39°58'16"	102°30'49"
Field 9-W	160		3/4	1S	46W	Yuma	39°59'55"	102°31'24"
Field 10-W	130	NW	4	1S	46W	Yuma	39°59'56"	102°32'12"
Field 11-W	124	NW	8	1S	46W	Yuma	39°59'10"	102°33'19"
Field 12-W	640		21	1S	46W	Yuma	39°57'16"	102°31'53"
Field 13-W	160	NE	24	1S	47W	Yuma	39°57'28"	102°34'58"
Field 14-W	160	NW	24	1S	47W	Yuma	39°57'27"	102°35'31"
Field 15-W	160	SE	14	1S	47W	Yuma	39°57'54"	102°36'4"

2. Prohibited Discharges

Operations shall be conducted in a manner that does not result in contamination of ground water or a discharge to surface water not specifically authorized by this permit. Subsection 61.13(4)(d)(xvi)(A)(I)(1) of Regulation No. 61, provides that there shall be no discharge of residual solids or swine feeding process wastewater into surface water from the production area except whenever precipitation causes an overflow of residual solids or swine feeding process wastewater, pollutants in the overflow may be discharged into surface water provided: 1) the production area is designed, constructed, operated, and maintained to contain all residual solids and swine feeding process wastewater, including the runoff and direct precipitation from a 25-year, 24-hour storm, at minimum; 2) the production area is operated in accordance with the production area best management practices specified in subsections 61.13(4)(c)(vi) and 61.13(4)(d)(x), (xi), and (xii), and the records specified in subsections 61.13(4)(j)(i), (ii), and (iii); and 3) the production area is operated and maintained in accordance with the provisions in subsection 61.13(4)(d) not pertaining to land application. As all open surface impoundments and tanks which are used to treat, store, or evaporate swine feeding process wastewater shall have two feet of freeboard above the working liquid level, if the facility receives precipitation in an amount greater than the volume in this two feet of freeboard, under this permit the facility can discharge into surface water from its production area.

B. TERMS AND CONDITIONS

1. Facility Location Standards

Housed commercial swine feeding operations (HCSFOs) shall comply with the following water quality setbacks:

- a) No swine feeding process wastewater collection systems in housed units, swine feeding process wastewater conveyance, treatment, storage, and evaporation structures, land application sites, and residual solids stockpiles and impoundments, shall be located:
 - i) Within 10 feet vertically of the seasonally high ground water level as determined in the monitoring plan;
 - ii) Up-gradient and within 300 feet of a reservoir classified for Class I Recreational Use by the Water Quality Control Commission;
 - iii) Within 50 feet of any body of surface water, including intermittent streambeds when standing or running water is present in the streambed;
 - iv) Within 150 feet of a private domestic water supply well or within 300 feet of a community domestic water supply well.
- b) No portion of a land application system receiving swine feeding process wastewater and/or residual solids shall be located:
 - i) Within 200 feet of any body of surface water, including intermittent streambeds when standing or running water is present in the streambed, unless land application is made by either subsurface injection, or by surface application which is followed by incorporation within 48 hours, weather permitting, or the swine waste management plan describes appropriate measures which will be implemented to prevent runoff from the application site into the water body.
- c) No portion of any swine feeding process wastewater treatment, storage, and/or evaporation impoundment, or residual solids stockpile shall be located within a 100-year floodplain (based on designations by the Colorado Water Conversation Board, where available), unless approved flood proofing measures (structures) are designed and constructed.

2. Operational Standards

- a) The permittee shall implement the most recently approved Operations Plan upon receiving notice from the Division of such approval. Proposed revisions to the permittee's Operations Plan shall be submitted by the permittee as necessary to have the Operations Plan comply with the following elements.
 - i) Procedures for the operation and maintenance of swine feeding process wastewater collection systems in housed units and swine feeding process wastewater and residual solids conveyance, treatment, storage, and land application systems to ensure their continued functionality, including periodic inspection procedures to ensure their physical and mechanical integrity.
 - ii) Procedures to address spills and prevention of contamination due to equipment or structural failure and power outages. Such procedures shall not apply to spills that qualify as "de minimis" relative to the site-specific conditions, in accordance with a site-specific interpretation of "de minimis" proposed by the permittee, approved by the Division, and included in Part I.4 of this permit.
- b) Accumulations of solids shall be removed from the swine feeding process wastewater treatment, storage, and evaporation impoundments and tanks as necessary to ensure sufficient capacity to retain all swine feeding process wastewater produced during periods when land application or disposal operations cannot be conducted due to conditions which may preclude land application in accordance with section 61.13(4)(e) of Regulation No. 61.
- c) Removal of solids or swine feeding process wastewater from an impoundment shall be accomplished in a manner that does not damage the integrity of the liner.
- d) Residual solids stockpile areas shall be constructed to ensure that all precipitation which comes in contact with the stockpiles is captured and diverted to appropriate swine feeding process wastewater treatment or evaporation facilities.
- e) Swine feeding process wastewater collection systems in housed units and swine feeding process wastewater conveyance systems shall be operated and maintained to collect and convey peak flows without overflowing.
- f) Swine feeding process wastewater collection systems in housed units, swine feeding process wastewater conveyance systems, and impoundments and tanks which are used to treat, store, or evaporate swine feeding process wastewater shall be maintained such that the seepage rate from any such system, tank, or impoundment does not exceed 1×10^{-6} cm/sec.
- g) The following inspections must be completed:
 - i) Weekly inspections shall be made in the production area of all freshwater run-on diversion devices, devices channeling contaminated stormwater to impoundments or tanks, runoff diversion structures, and impoundments and tanks. Such inspections of impoundments and tanks shall note the level of swine feeding process wastewater as indicated by the depth marker.
 - ii) Daily inspections shall be made of water lines in the production area, including drinking water or cooling lines. Such inspections should be primarily of water lines that have potential to add process wastewater to any impoundment or that, if leaking, would result in a discharge to surface water.
 - iii) The owner or operator shall periodically inspect equipment used for land application of residual solids or swine feeding process wastewater.

- h) Any deficiencies found as a result of the daily and weekly inspections identified in i) and ii) above, shall be corrected as soon as possible, but no later than 30 days of such a deficiency having been identified, unless factors preventing correction within 30 days have been documented.
- i) Mortalities must not be disposed of in any liquid residual solids or swine feeding process wastewater system, and must be handled in such a way as to prevent the discharge of pollutants to surface water, unless an alternative performance standard is approved by the Division of Environmental Health and Sustainability's Environmental Agriculture Program (Division) that includes a technology designed to handle mortalities.
- j) Operations that introduce swine feeding process wastewater pollutants into publicly owned treatment works (POTW) must comply with the pretreatment standards required in 40 CFR 403.
- k) The permittee shall comply with the provisions of the plans submitted and approved under section 61.13(4)(a) of Regulation No. 61. The Division may amend or reissue the permit to include all or part of any approved plan as a condition of the permit.
- l) The permittee shall maintain on site a copy of its most current swine waste management plan and make it available to the Division or its designee, upon request.

3. Swine Waste Management Plan

- a) Swine Waste Management Plan Elements
 - i) A HCSFO shall develop and implement a complete swine waste management plan as of the date of permit coverage. The swine waste management plan must comply with the provisions of subsections 61.13(3)(f), 61.13(4)(e) and 61.13(4)(f)(iii) of Regulation No. 61. The plan shall be prepared under the supervision of a professional engineer registered in the State of Colorado, by the Natural Resources Conservation Service, by a qualified Cooperative Extension Agent, by a certified crop advisor certified by the American Society of Agronomy or by an independent crop consultant certified by the National Alliance of Independent Crop Consultants. The plan shall include sufficient site-specific hydrologic and agronomic information, supplemented by other scientifically supported information, to document that land application of all residual solids and swine feeding process wastewater will be conducted and sustained at or below the agronomic rate of application for crops or vegetation to be grown on the application site(s). The plan shall quantify the disposition of all residual solids and swine feeding process wastewater produced at the facility whether put to beneficial use through land application on-site or transported off-site. The swine waste management plan must identify and address the following:
 - A) Daily, seasonal, and annual quantities and/or flow rates of residual solids and swine feeding process wastewater to be applied to the land area;
 - B) Concentrations of specific constituents including, but not limited to, nitrogen, phosphorus, heavy metals, and salts present in the residual solids or swine feeding process wastewater as a result of the housed commercial swine feeding operation;
 - C) Climatic conditions, including temperature and precipitation regime, as they may seasonally affect the plants' ability to uptake nutrients and other constituents present in the wastewater;
 - D) Soil types in the land application sites;
 - E) Documentation which supports any post-treatment reduction in waste concentration(s) prior to land application;
 - F) Identify the crops to be planted in each field, or any other uses such as pasture or fallow fields. Identify alternative crops that are not in the planted crop rotation for each field. Identify the realistic yield goal for each crop and alternative crop for each field.

- G) The specific land parcels and acreage to receive the residual solids and swine feeding process wastewater and a demonstration that adequate and suitable land is available upon which to land apply the residual solids and swine feeding process wastewater in accordance with the agronomic rate of application;
- H) Identify the constituents in residual solids, swine feeding process wastewater, and soils that will be analyzed, and the testing protocols that will be used for the analyses, to ensure the provisions of subsection 61.13(4)(e) of Regulation No. 61 are met;
- I) Identification and a description of the methods for determining application rates and setbacks, and the potential for nitrogen and phosphorus transport from land application sites that will ensure the provisions of subsection 61.13(4)(e) and 61.13(4)(f)(iii) of Regulation No. 61 are met;
- J) A description of the planned method of residual solids and swine feeding process wastewater land application, disposal, or other usage, land application leak inspection protocols, and surface water runoff controls and setbacks that will be implemented to prevent wastes from being discharged to waters of the state or beyond the property boundary of the land application site;
- K) A description of how the permittee will ensure adequate storage of residual solids and swine feeding process wastewater, including procedures to ensure proper operation and maintenance of the storage facilities;
- L) A description of how animal mortalities will be managed to ensure that they are not disposed of in any liquid residual solids or swine feeding process wastewater system that is not specifically designed to treat animal mortalities, and are handled in such a way as to prevent the discharge of pollutants to surface waters;
- M) Indicate how the permittee will ensure that clean water is diverted, as appropriate, from the production area;
- N) Indicate how swine will be prevented from having direct contact with surface water;
- O) A description of how chemicals and other contaminants handled on-site are not disposed of in any residual solids or swine feeding process wastewater storage or treatment system unless specifically designed to treat such chemicals and other contaminants;
- P) Identify specific records that will be maintained to document the implementation and management of the elements required in subsections 61.13(3)(f)Vii through (xvi) of Regulation No. 61;
- Q) Feed management practices employed, if any, to reduce nutrient concentrations in swine feeding process wastewater or residual solids;
- R) If swine waste is to be applied on property not owned by the permittee, written agreements with landowners for off-site land application must be included in the plan. Agreements entered into after March 30, 1999, with landowners for land application shall allow the Division or its agent to assume the rights of the permittee under the agreement in the event that a facility must be brought to final closure by the state unless alternative treatment and disposal are provided for under the financial assurance plan, subsection 61.13(3)(h). The permittee shall provide notice to each landowner of property on which off-site land application occurs of the Division's authority to enter and inspect premises pursuant to section 25-8-306, C.R.S. The permittee shall provide evidence that any agreement with the landowner entered into after March 30, 1999, provides a right of entry to the Division to monitor for compliance with the permit, either directly in the agreement or by assignment of

the permittee's rights under the agreement. The Division may require that the permittee cease land application on any off-site lands to which the Division is denied entry.

ii) Changes to the Swine Waste Management Plan

- A) Any permit issued to a HCSFO must require the following procedures when a HCSFO owner or operator makes changes to the swine waste management plan previously submitted to the Division:
- 1) The HCSFO owner or operator must provide the Division with the most current version of the HCSFOs swine waste management plan and identify changes from the previous version, except that the results of calculations made in accordance with the requirements of paragraph 61.13(4)(e) of Regulation No.61 are not subject to the requirements of this section.
 - 2) The Division must review the revised swine waste management plan to ensure it meets the requirements of this section and applicable effluent limitations and standards, including those specified in 61.13(4) of Regulation No. 61 and must determine whether the changes to the swine waste management plan necessitate revision to the terms of the swine waste management plan incorporated into the permit issued to the HCSFO.
 - a. If revision to the terms of the swine waste management plan is not necessary, the Division must notify the HCSFO owner or operator and upon such notification the HCSFO may implement the revised swine waste management plan.
 - b. If the Division determines that the changes to the terms of the swine waste management plan are necessary, the Division must notify the public and make the proposed changes and the information submitted by the HCSFO owner operator available for public review and comment. The process for public comments, hearing request, and the hearing process if a hearing is held must follow the procedures applicable to draft permits set forth in 61.5 of Regulation No. 61. Once the Division incorporates the changes to the terms of the swine waste management plan into the permit, the Division must notify the owner or operator and inform the public of the final decision concerning changes to the terms and conditions of the permit.
 - 3) Changes to any terms of the swine waste management plan are incorporated as terms and conditions of the permit. Such changes include, but are not limited to:
 - a. Addition of new land application areas not previously included in the HCSFOs swine waste management plan;
 - b. Any changes to the maximum amounts of nitrogen and phosphorus derived from all sources for each crop, as set forth in paragraph 61.13(4)(e) of Regulation No. 61.
 - c. Addition of any crop or other uses not included in the terms of the HCSFOs swine waste management plan and corresponding field-specific rates of application expressed in accordance with paragraph 61.13(4)(e) of Regulation No. 61.
 - d. Changes to site-specific components of the HCSFOs swine waste management plan, where such changes are likely to increase the risk of nitrogen and phosphorus transport to surface water.
- b) The disposal or land application of all residual solids and swine feeding process wastewater produced at the facility, whether put to beneficial use on-site or transported off-site, must minimize phosphorus and nitrogen transport from the land application sites to surface waters and shall be in accordance with the approved swine waste management plan.

- c) Application rates of residual solids and swine feeding process wastewater shall be based on a field specific assessment of the potential nitrogen and phosphorus transport from the field and that addresses the form, source, amount, timing, and method of application of nutrients on each field to achieve realistic yield goals, while minimizing nitrogen and phosphorus movement to surface waters.
 - i) Assessments shall be made for each land application site of the potential for phosphorus and nitrogen transport from the site to surface waters and that address the form, source, amount, timing, and method of application of nitrogen and phosphorus to achieve realistic yield goals, while minimizing nitrogen and phosphorus movement to surface water. Phosphorus transport risk assessments shall be made using a transport risk-screening tool approved by the Division and that is current, readily available, peer-reviewed, and appropriate for use in Colorado. An initial assessment of the potential for nitrogen transport to surface water shall be made prior to residual solids or swine feeding process wastewater being applied to an application site after the operator implements the approved swine waste management plan that meets the requirements of subsection 61.13(3)(f) of Regulation No. 61.
 - ii) After an initial assessment is made of the potential for phosphorus and/or nitrogen transport from a land application site to surface water, additional assessments shall be made at the following frequency, whichever is sooner:
 - A) Of both phosphorus and nitrogen transport risk, every five years; or
 - B) Where a crop management change has occurred, assess phosphorus transport risk within one year after a crop management change would reasonably result in an increase in the phosphorus transport risk assessment score, and assess nitrogen transport risk within one year after such a change would reasonably result in the nitrogen transport to surface water not being minimized; or
 - C) Where the top one foot of soil on an application site exceeds 80 mg/kg of sodium bicarbonate extractable phosphorus and the phosphorus transport risk assessment score was very high, assess phosphorus transport risk within six months of intending to apply residual solids or swine feeding process wastewater.
 - iii) Where a nitrogen transport risk assessment reveals that nitrogen transport to surface waters is not minimized, assess nitrogen transport risk within six months of intending to apply residual solids or swine feeding process wastewater.
- d) Where a multi-year phosphorus application was made to a land application site, no additional residual solids or swine feeding process wastewater shall be applied to the same site in subsequent years until the applied phosphorus has been removed from the site via harvest and crop removal.
- e) Swine feeding process wastewater and residual solids shall not be applied:
 - i) To land by any person at a rate that exceeds, in amount or duration, the agronomic rate of application. The agronomic rate of application shall be as specified by the most current published fertilizer suggestions of the Colorado State University Cooperative Extension for the plants, or most closely related plant type, to which the nutrients are applied;
 - ii) To any lands if the soil nitrate level and other appropriate nitrogen credits in the root zone (as specified by the Colorado State University Cooperative Extension Service) exceed the agronomic rate of nitrogen application for the crop grown;
 - iii) To a land application site if the sodium bicarbonate extractable phosphorus in the top one-foot of soil exceeds 80 mg/kg, unless the off-site phosphorus transport risk score for the site is high or less;

- iv) To a land application site where the risk of off-site nitrogen transport is high or very high;
- f) Residual solids, swine feeding process wastewater, and soils shall be sampled and analyzed in accordance with the monitoring requirements specified in subsection 61.13(4)(k)(vi) of Regulation No. 61 and in Part I.B.5 of this permit. The most recent results of these analyses are to be used in determining application rates for residual solids and swine feeding process wastewater.
- g) All land application activities shall be conducted in a manner that does not result in impairment of existing beneficial uses of state waters or exceedances of applicable water quality standards for surface water or ground water.
- h) If the soil nitrate-nitrogen level in the four- to six-foot, or six- to eight-foot increment within the monitoring zone exceeds the comparative concentration established in accordance with subsection 61.13(4)(k)(ii) of Regulation No. 61 by greater than 10 mg/kg, the permittee will be presumed to have exceeded the agronomic rate of application and shall notify the Division in writing of this exceedance within 30 days of discovering it.
- i) The permittee shall, in consultation with the Division, develop and submit to the Division within 90 days of discovering the exceedance an approvable intervention protocol, unless an extension of time is granted by the Division. The intervention protocol shall describe adjustments to the swine waste management plan that provide for strict minimization of future nitrogen loading within the monitoring zone. The Division may specify that appropriate measures for the purpose of remediating excessive nitrogen within the monitoring zone be included in the protocol.
 - i) The protocol shall be implemented by the permittee within 30 days of it being approved by the Division. If remediation measures in an approved intervention protocol are not being implemented in accordance with the protocol, application of swine feeding process wastewater and/or residual solids to the applicable land application site shall immediately cease.
 - ii) The agronomic rate of application shall not be presumed to have been exceeded and the intervention protocol shall not be required if the results of confirmation sampling pursuant to a procedure approved by the Division demonstrate that the comparative concentration has not been exceeded by greater than 10 mg/kg, or if the permittee submits to the Division a report that adequately documents that a force majeure was the cause of the nitrate-nitrogen exceedance. This report shall be submitted for approval no later than 30 days after discovering an exceedance caused by a force majeure event.
 - iii) The status of intervention protocol activities shall be documented in quarterly monitoring reports.
- j) For the purposes of g) above, the comparative concentration shall be equal to the lesser nitrate-nitrogen concentration value of the following: 1) the baseline concentration determined pursuant to Part (I)(B)(5)(a) of this permit; or 2) the concentration found within the respective four- to six-foot, or six- to eight-foot soil increment, as applicable, in the soil sample just prior to the most recent soil sample that was taken from below the land application site. Where the nitrate-nitrogen concentration in the most recent soil sample exceeds the comparative concentration by greater than 10 mg/kg as the result of the agronomic rate of application having been exceeded, the succeeding comparative concentration for the applicable land application site shall be equal to the most recent comparative concentration plus 10 mg/kg, or the baseline nitrate-nitrogen concentration, whichever is less.
- k) The requirements of Part I.B.3 are independently applicable to each land application site receiving swine feeding process wastewater or residual solids. Noncompliance with any applicable provision of Part I.B.3 of this permit at a specific land application site shall not in and of itself preclude the permittee from use of other land application sites, provided that such use is in conformance with applicable requirements of this permit and with section 61.13 of Regulation No. 61.

- l) During those periods when land application sites are not supporting active plant growth, application of swine feeding process wastewater and residual solids shall not at any time cause soil nitrate levels and other appropriate nitrogen credits in the agronomic root zone to exceed the agronomic rate for the upcoming growing season for the crop for which the solids or wastewater is applied.
- m) Swine feeding process wastewater and residual solids shall not be applied to land not supporting active plant growth except as provided under an approved swine waste management plan that includes appropriate best management practices for such applications.
- n) Swine feeding process wastewater and residual solids which are applied to land shall not exceed the cumulative pollutant loading limit for heavy metals as set forth in Table 1, below. Cumulative metal loading limits shall be calculated as the product of the total elemental analysis (concentration) of the residual solids and swine feeding process wastewater and the quantity of residual solids and volume of swine feeding process wastewater applied, respectively. Compliance with cumulative pollutant loading limits shall be documented by the permittee in reports submitted in accordance with Part I.B.9 of this permit. Documentation shall consist of data which quantifies cumulative loadings of the heavy metals to each land application site. If the cumulative loading limit for any parameter specified in Table 1 is reached, no further residual solids or swine feeding process wastewater will be applied to the application site.

TABLE 1: CUMULATIVE POLLUTANT LOADING LIMITS		
<i>Pollutant</i>	<i>Kilograms per Hectacre (kg/ha)</i>	<i>Pounds per Acre (lbs/ac)</i>
Arsenic	41	37
Cadmium	39	35
Copper	1500	1339
Lead	300	268
Mercury	17	15
Nickel	420	375
Selenium	100	89
Zinc	2800	2499

- o) The monitoring requirements for any of the constituents identified in Table 1 above may be waived if it is demonstrated by the permittee, based upon such information requested by the Division, that there is no reasonable potential of contamination from such constituents at the permitted facility.
- p) Any reduction in swine feeding process wastewater nutrient concentrations as a result of losses subsequent to swine feeding process wastewater treatment and prior to land application shall be supported by site-specific data or applicable published engineering or agricultural waste management principles and shall be in accordance with the approved odor management plan.
- q) Land application practices shall be managed to ensure that no residual solids or swine feeding process wastewater are discharged to waters of the state or beyond the property boundary of the application site.

- r) Land application of residual solids or swine feeding process wastewater is prohibited:
 - i) On lands which are saturated or on lands with a snow depth of greater than one inch;
 - ii) On lands which are frozen unless a site-specific analysis demonstrates that runoff will not occur;
 - iii) More than 30 days prior to or subsequent to the normal growing season for the crop to which the wastewater is being applied, or outside of the period March 1 through October 31 whichever is less restrictive, except pursuant to the approved odor management, swine waste management, and monitoring plans.

4. Spills

- a) The permittee shall take immediate action to clean-up all spills so that impacts to soils, surface water or ground water are minimized to the greatest extent practicable. These requirements shall not apply to spills that qualify as “de minimis” relative to the site-specific conditions, in accordance with a site-specific interpretation of “de minimis” proposed by the permittee and approved by the Division. Specific spill reporting requirements are specified at Part I.B.9.e) of this permit.
- b) Unless included in the Operations Plan, the Swine Waste Management Plan will include a proposed, site specific interpretation of “de minimis” spill. The permittee shall comply with the most recently approved interpretation of “de minimis” spill, upon receiving notice from the Division of such approval.
- c) If it is determined that remediation of any spill or contamination by a housed commercial swine feeding operation cannot be completed within 60 days, the permittee may be required to undertake corrective action as specified by the Division. In such an instance, the Division may require adjustment of financial assurance as required in Part I.B.6 of this permit.

5. Monitoring Standards

- a) The permittee shall implement the most recently approved Monitoring Plan (MP) upon receiving notice from the Division of such approval. Where no MP has been approved for the permittee, the most recent MP submitted to the Division shall be implemented as of the date of permit issuance. Proposed revisions to the permittee’s MP shall be submitted by the permittee as necessary to have the MP comply with the elements required at section 61.13(3)(g) of Regulation No. 61. Once the MP is approved, subsequent revisions proposed for the MP must be approved by the Division before being incorporated into the MP.
- b) The permittee shall provide baseline information with the Monitoring Plan which establishes concentrations of nitrate-nitrogen and ammonium-nitrogen in the soils within the agronomic root zone and monitoring zone in each land application site identified in the approved swine waste management plan. Information shall also be provided which establishes the concentrations of phosphorus in the top one-foot increment of soil in each land application area identified in the approved swine waste management plan.
- c) Baseline concentrations shall be re-established by an existing operation where the permit has expired, lapsed, or otherwise has not been valid for two years or more, or where housed commercial swine feed operation activities have not occurred for two years or more.
- d) For the purposes of sampling soils to acquire baseline information: The agronomic root zone shall be defined as the soil zone of land application sites that is sampled and analyzed for required constituents for monitoring purposes and for calculating the agronomic rate of application. The depth of the agronomic root zone is as specified by the most current published fertilizer suggestions of Colorado State University Cooperative Extension for the plants, or the most closely related plant type, to which plant nutrients are to be applied.

- e) The monitoring zone shall be defined as follows:
- i) Between four and six feet below the land surface for shallow-rooted crops, unless rooting depth restrictions exist at a shallower depth, as defined in (iv) below;
 - ii) Between four and eight feet below the land surface for deep-rooted crops, unless rooting depth restrictions exist at a shallower depth, as defined in (iv) below;
 - iii) Between four and eight feet below the land surface for land application sites that have been found to be predominately composed of soils that are classified as sandy, sandy loam, or loamy sand in texture throughout the entire soil profile, unless rooting depth restrictions exist at a shallower depth, as defined in (iv) below;
 - iv) The presence and depth of, or absence of, a root growth restrictive layer in the soil profile will be determined by a site-specific pedological soil analysis performed by a qualified soil scientist (i.e., Natural Resources Conservation Service soil scientist or equivalently trained individual).
- f) Monitoring of soils for, at minimum, nitrogen species, phosphorus, heavy metals and salts, shall be on a quarterly basis except when this frequency is not practicable due to: 1) physical conditions (e.g., frozen or saturated ground); 2) the potential for excessive damage to crops; or 3) when applications of swine feeding process wastewater or residual solids to specific land sites will not be made for at least three consecutive quarters. The nitrogen species monitored in soils shall be nitrate-nitrogen and ammonium-nitrogen within the agronomic root zone and nitrate-nitrogen within the monitoring zone.
- i) If a quarterly soil sample was not taken of a land application site for any of the three reasons listed in e) above, the permittee shall inform the Division of this fact in their quarterly report and specify the reason for the sample not having been taken.
 - ii) When application of swine feeding process wastewater or residual solids has not been conducted for three consecutive quarters, soil monitoring shall occur within 90 days after the crop to which applications were made is harvested or goes dormant and for subsequent quarters as required by the Division based on nitrogen values observed in the post-harvest soil tests. The permittee shall notify the Division in its quarterly reports of their intention not to apply solids or wastewater to specific land application sites for at least three consecutive quarters.
- g) The Division may waive monitoring requirements for salts and sodium bicarbonate extractable phosphorus below the one foot soil depth if it is demonstrated by the permittee, based upon such information as requested by the Division, that there is no reasonable potential of contamination from such constituents at the permitted facility.
- h) Monitoring of swine feeding process wastewater and residual solids for, at minimum, nitrogen species (specified in Table 2), phosphorus, heavy metals and salts, shall be on a quarterly basis or other frequency specified by the Division.
- i) Soil samples shall be analyzed according to methods specified in "Methods of Soil Analysis, Part 3, Chemical Methods"; Number 5 in the Soil Science Society of America Book Series; Soil Science Society of America, Inc. and American Society of Agronomy, Inc. Madison, Wisconsin. 1996. When requested in writing, the Division may approve an alternative analytical procedure of any significant modification to a procedure specified in "Methods of Soil Analysis, Part 3, Chemical Methods", in accordance with section 61.8(4) of Regulation No. 61.
 - j) Swine feeding process wastewater shall be analyzed according to methods specified or approved by the U.S. Environmental Protection Agency pursuant to 40 C.F.R. Part 136, or methods approved by the Division, in the absence of an appropriate method specified in or approved pursuant to 40 C.F.R. Part 136. When requested in writing, the Division may approve an alternative analytical procedure

or any significant modification to an approved procedure in accordance with section 61.8(4) of Regulation No. 61. Residual solids shall be analyzed using protocols recommended by Colorado State University Cooperative Extension or a Cooperative Extension office in a state neighboring Colorado.

- k) The permittee shall provide in the SWMP baseline information representative of normal operating conditions which establishes concentrations of the constituents identified in Table 2 (below), at minimum, that are present in the residual solids and swine feeding process wastewater as a result of the housed commercial swine feeding operation. The permittee shall provide a new assessment of the constituents identified in Table 2 whenever changes to the operation occur that could significantly change the concentrations of these constituents in the residual solids or swine feeding process wastewater.
- i) The Division may waive monitoring requirements for any of the heavy metals identified in Table 2 (below), if the permittee demonstrates, based upon such information as requested by the Division, that there is no reasonable potential of contamination from such constituents at the permitted facility.

TABLE 2: SWINE FEEDING PROCESS WASTEWATER/RESIDUAL SOLIDS PARAMETERS			
Total Arsenic	Total Mercury	pH	Salts ¹
Total Cadmium	Total Nickel	Nitrate as N	Total Phosphorus
Total Copper	Total Selenium	Organic Nitrate as N	Total Solids ²
Total Lead	Total Zinc	Ammonia as N	Total Dissolved Solids ¹

¹ required for swine feeding process wastewater only

² required for residual solids only

- l) The permittee shall also include monitoring to ensure that no seepage occurs from any waste impoundments in excess of those rates established in sections 61.13(4)(c)(iii) or 61.13(4)(g)(ii)(C) of Regulation No. 61, as appropriate.
 - i) Where the permittee has installed double liners with leak detection mechanisms, ground water monitoring around all such impoundments shall not be required
- m) The permittee shall monitor quarterly the ground water beneath each land application site. The monitoring shall be accomplished by sampling and analyzing the ground water in monitoring wells that are in locations identified in the approved monitoring plan.
 - i) The Division may waive monitoring requirements for salts and sodium bicarbonate extractable phosphorus in ground water if it is demonstrated by the permittee, based upon such information as requested by the Division, that there is no reasonable potential of contamination from such constituents at the permitted facility
 - ii) Ground water monitoring shall not be required for land application sites for which the permittee submits, and the Division approves: 1) information documenting that ground water does not exist beneath a land application site; 2) information documenting that an impermeable geological layer exists beneath a land application site, and above the shallowest aquifer located beneath the land application site; or 3) a complete analysis of one-dimensional transport of water within the vadose zone of the land application site using a transport model, mathematical calculation or

other Division-approved methods. The mathematical analysis shall be prepared by, or certified by, a professional engineer registered in the State of Colorado, a qualified professional geologist or ground water hydrologist. The analysis must conclude that water that annually passes below the root zone of the land application site will not reach ground water within 100 years.

Approval of the analysis does not remove the Division's authority to require at any time, as the result of soil monitoring information or for other reasons, the installation of new or additional wells for the purpose of monitoring ground water beneath a land application site. Immediately upon approval of the analysis, the permittee shall proactively protect ground water by implementing the following requirements

- A) Quarterly sample the two one-foot increments of soil below the monitoring zone for each land application site, in addition to other soil sampling requirements indicated in subsection 61.13(4)(k)(vi) of Regulation No. 61, except when this frequency is not practicable due to one of the three scenarios presented in subsection 61.13(4)(k)(vi)(A) of Regulation No. 61. The Division may require quarterly monitoring of soils at depths beneath two feet below the monitoring zone based on a nitrogen-loading trend analysis of the monitoring zone or below the monitoring zone.
 - B) Analyze the two one-foot increments of soil for nitrate-nitrogen.
 - C) Notify the Division in writing within 30 days of discovering that the cumulative soil nitrate-nitrogen concentration level in any two foot increment within the monitoring zone, or in any one foot increment below the monitoring zone, exceeded the comparative concentration by greater than 10 mg/kg.
 - D) In consultation with the Division, develop and submit an approvable intervention protocol within 90 days of the permittee discovering that the cumulative soil nitrate-nitrogen concentration level in any two foot increment within the monitoring zone, or in any one foot increment below the monitoring zone, exceeds the comparative concentration by greater than 10 mg/kg, unless an extension of time is granted by the Division. The intervention protocol shall provide for strict minimization of future nitrate-nitrogen loading within the monitoring zone and below the monitoring zone. The Division may specify that appropriate measures be included in the protocol for the purpose of remediating excessive nitrogen within the monitoring zone and below the monitoring zone.
 - E) The protocol shall be implemented by the permittee within 30 days of it being approved by the Division. If remediation measures in an approved intervention protocol are not being implemented in accordance with the protocol, application of swine feeding process wastewater and/or residual solids to the applicable land application site shall immediately cease.
 - F) The intervention protocol shall not be implemented if the permittee submits to the Division a report that adequately documents that a force majeure was the cause of soil nitrate-nitrogen concentrations exceeding the comparative concentration by greater than 10 mg/kg.
 - G) Document the status of intervention protocol activities in applicable quarterly monitoring reports.
- n) Any required ground water sampling and analysis shall be performed by the permittee according to specified methods in 40 C.F.R. Part 136; methods approved by EPA pursuant to 40 C.F.R. Part 136; or methods approved by the Division, in the absence of a method specified in or approved pursuant to 40 C.F.R. Part 136. When requested in writing, the Division may approve an alternative analytical procedure or any significant modification to an approved procedure in accordance with section 61.8(4) of Regulation No. 61.

6. Financial Assurance Standards

- a) The permittee shall implement the most recently approved Financial Assurance Plan (FAP) upon receiving notice from the Division of such approval. Proposed revisions to the permittee's FAP shall be submitted by the permittee as necessary to ensure continued compliance with section 61.13(3)(h) of Regulation No. 61. Once the FAP is approved, any new or proposed revisions to the FAP must be approved by the Division before incorporating into the FAP.
- b) The permittee shall provide financial assurance for the final closure of the housed commercial swine feeding operation and the conduct of any necessary post-closure activities. Financial assurance shall be provided by any permittee operating a housed commercial swine feeding operation in existence on or before March 30, 1999, within 90 days following the Division's approval of a new or revised financial assurance plan. Failure to provide the approved amount of financial assurance shall be a violation of the permit and may be cause for revocation of the permit. The financial assurance instruments shall be in the amounts determined in the approved financial assurance plan and shall use wording approved by the Division, as set forth in Colorado Water Quality Control Commission Regulation No. 66, Financial Assurance Criteria Regulations for Colorado Housed Commercial Swine Feeding Operations, 5 CCR 1002-66, (Regulation No. 66). If required by the Division, based on evidence that conditions create a reasonable potential for the operation to cause contamination, the permittee shall provide financial assurance for any corrective action made necessary by such contamination.
- c) Where the Division has found a financial assurance plan to be incomplete, and the permittee is either not working in good faith to submit an approvable plan or does not respond to the Division's comments regarding the plan within a reasonable time, the Division may require that interim financial assurance be provided until such time as the financial assurance plan is approved.
- d) Before requiring interim financial assurance, the Division shall provide the permittee written notice of the deficiencies and an opportunity to cure those deficiencies within 90 days of the written notice. If the period to cure expires without the permittee resolving the deficiencies, and an extension of time has not been granted by the Division, the amount of interim financial assurance required shall be established by the Division, based on relevant information related to the permittee.

The permittee shall review and update the financial assurance instruments each year. Upon Division review and approval of the Financial Assurance Plan, this permit will be re-opened and amended to specify a schedule for review and update of the financial assurance instruments. The amount of the financial assurance for closure and post-closure and for any applicable corrective action shall be recalculated annually by the permittee and shall account for inflation or deflation by using the most recent Implicit Price Deflator for Gross Domestic Product or its successor as published by the U.S. Department of Commerce. The recalculated amount shall also reflect any changes in the operation pertinent to the cost of closure, post-closure or required corrective action, to address contamination. Provided, that for any year in which there have been no changes in the operation pertinent to the cost of closure, post-closure, or required corrective action and cumulative inflation as calculated above does not exceed five percent since the last update of the financial assurance instruments, no further update of the financial assurance instruments is required. The permittee shall have 90 days to adjust the amount of financial assurance provided after receipt of notification that the revised cost estimates have been approved by the Division. Failure to provide any increased amount of financial assurance, as required, shall be a violation of the permit and may be cause for revocation of the permit.

- e) If at any time the Division determines that a permittee has insufficient financial assurance, it shall notify the permittee, and the permittee shall have 90 days to recalculate and adjust the amount of financial assurance provided. Failure to provide any increased amount of financial assurance, as required, shall be a violation of the permit and may be cause for revocation of the permit.

- f) All forms of financial assurance shall be approved by the Division before being accepted. Subject to approval by the Division, the applicant or permittee shall use one or more of the following financial mechanisms to assure full payment of all closure, post-closure and estimated costs for any required corrective action: irrevocable standby letter of credit; trust fund; surety bond; insurance; financial test and written guarantee; and other mechanisms approved by the Division. The financial test and written guarantee mechanism shall meet specified criteria identified in Regulation No. 66. With the exception of the trust fund, insurance, and the financial test and written guarantee, all other listed mechanisms also require the establishment of a standby trust. The issuing institution of any form of financial assurance must have the authority to issue that form of financial assurance and its operations shall be regulated and examined by a federal or state agency. The issuing institutions of any form of financial assurance are required to waive all rights of set off or liens against the mechanism.
- g) The permittee shall immediately notify the Division of any notice received or action filed alleging the insolvency or bankruptcy of the institution issuing the financial assurance mechanism, or alleging any violations of regulatory requirements that could result in suspension or revocation of the issuing institution's charter or license to do business. In the event the permittee becomes aware that the issuing institution is unable to fulfill its obligations under the financial assurance mechanism for any reason, notice shall immediately be given to the Division. The permittee shall have 90 days from the date of such notice to replace the required amount of financial assurance. Failure to provide any substitute or replacement financial assurance, as required, shall be a violation of the permit and may be cause for revocation of the permit.
- h) Release of the Permittee from the Requirements for Financial Assurance.
 - i) No form of financial assurance shall be approved unless it contains a term that provides that the financial assurance may not be canceled by the surety or guarantor unless 60 days prior written notice is given to the Division, and the Division gives written consent which may be granted only when the applicable requirements of section 61.13(4)(h) of Regulation No. 61 have been fulfilled.
 - ii) When closure, post-closure, and corrective actions required by a permit are complete, financial assurance shall be released by the Division as follows:
 - A) When the Division determines that initial closure activities have been completed for an operation, financial assurance, less identified retainages, shall be released.
 - B) A sufficient amount of financial assurance shall be retained to pay for estimated costs of post-closure activities. This portion of the financial assurance shall be held for a period of at least three years after initial housed commercial swine feeding operation closure activities are completed, unless the Division determines that a shorter period of time is appropriate.
 - C) The Division may release portions of the corrective action financial assurance for remediation of residual soil contamination, remediation of ground water contamination, or clean-up of any spill or breach when it determines that identified phases of required corrective action have been satisfactorily completed, less any retainages for completion of remaining requirements, such as confirmatory monitoring. Any amount remaining following final satisfactory completion of corrective action shall be released to the permittee.
 - D) Release of any amounts of financial assurance shall not release the permittee or other responsible person from any responsibility for meeting closure or corrective action requirements.

- i) Forfeiture of Bond or Other Form of Financial Assurance.
 - i) The Division may initiate financial assurance forfeiture after notice to the permittee and any surety that the permit has been violated and that there is a reasonable likelihood that the closure, post-closure, or corrective action obligations of the permittee will not be met.
 - ii) The Division may direct the expenditure of forfeited funds to remedy and abate the circumstances for which any financial assurance was required.
 - iii) Use of all financial assurance shall not relieve the permittee or other responsible parties from responsibility and liability for closure, post-closure, and corrective action costs. The Colorado Attorney General may bring suit to recover any costs incurred by the state for closure, post-closure or corrective actions not covered by collected financial assurance monies.

7. Compliance Schedule

- a) New constituent baseline determinations for Wilke Gilt Farm/Nursery Farm must be submitted 60 days after a six-month stabilization period. The six-month stabilization period will begin when Wilkie Gilt Farm/Nursery Farm is populated with nursery animals.
- b) The constituent baseline determinations for swine feeding process wastewater that must be submitted to the Division shall include: pH, nitrate as N, organic nitrogen as N, ammonia as N, salts, total phosphorus, and total dissolved solids.

8. Recordkeeping

- a) The permittee shall maintain on site a copy of its most current approved swine waste management plan.
- b) The permittee shall create, and maintain on site for five years from the date created and make available to the Division or its designee, upon request, the following complete records:
 - i) All applicable records identified in the swine waste management plan, pursuant to subsection 61.13(3)(f)(xv) of Regulation No. 61;
 - ii) The complete permit application required pursuant to subsection 61.13(3) of Regulation No. 61;
 - iii) The following complete records for the production area:
 - A) Records documenting the weekly visual inspections in the production area of all freshwater run-on diversion devices, devices channeling contaminated stormwater to impoundments or tanks, runoff diversion structures, and impoundments and tanks.
 - B) Records documenting the daily visual inspections of water lines in the production area, including drinking water and cooling lines.
 - C) Weekly records of the depth of residual solids and swine feeding process wastewater in liquid impoundments and terminal storage tanks as indicated by the depth marker required under subsection 61.13(4)(c)(vi) of Regulation No. 61.
 - D) Records documenting any actions taken to correct deficiencies found as a result of the inspections identified in Part I.B.2.f) i) and ii) of this permit. Deficiencies not corrected within 30 days shall be accompanied by an explanation of the factors preventing immediate correction.
 - E) Records of mortalities management and practices used to meet the requirements of Part I.B.2.h) of this permit.

- F) Records documenting the current design of any residual solids or swine feeding process wastewater storage structure, including volume of residual solids accumulation, design treatment volume, total design volume, and approximate number of days of storage capacity.
- G) Records of date, time, and estimated volume of any overflow.
- iv) The following complete records for land application sites:
 - A) Expected crop yields.
 - B) The date(s) residual solids or swine feeding process wastewater is applied to each field.
 - C) Weather conditions at the time of land application and for 24 hours prior to and following land application.
 - D) Test methods used to sample and analyze residual solids, soils, and swine feeding process wastewater.
 - E) Results from residual solids, swine feeding process wastewater, and soil sampling and analysis.
 - F) Explanation of the basis for determining residual solids and swine feeding process wastewater application rates, as provided in the swine waste management plan.
 - G) Calculations showing the total nitrogen and phosphorus that will be applied to each land application site, including sources other than residual solids or swine feeding process wastewater.
 - H) Total amount of nitrogen and phosphorus actually applied to each field, including documentation of calculations for the total amount applied.
 - I) The method used to apply the residual solids or swine feeding process wastewater.
 - J) Date(s) of inspections of residual solids and swine feeding process wastewater land application equipment.

9. **Reporting**

- a) The permittee shall provide baseline information representative of normal operating conditions which establishes concentrations of specific constituents including, but not limited to, nitrogen species, phosphorus, heavy metals, and salts present in the residual solids or swine feeding process wastewater as a result of the housed commercial swine feeding operation. Existing operations shall provide this information as part of its initial and subsequent amendments to its swine waste management plan. The permittee shall provide a new assessment of these constituents whenever changes to the operation occur that could significantly change the concentrations of these constituents in the residual solids or swine feeding process wastewater.
- b) Beginning no later than the specified reporting date for the first quarterly monitoring period after Division approval of the swine waste management plan, and on a quarterly basis thereafter, the permittee shall submit, to the Division and to the county health department having jurisdiction, comprehensive monitoring reports and agronomic analyses to demonstrate whether or not the operation has land applied residual solids and swine feeding process wastewater at no greater than agronomic rates. The reports shall include, but is not limited to, the results and underlying data for all soil, residual solids, swine feeding process wastewater, ground and surface water quality and vegetative nutrient analyses as required by this permit and as identified in the approved Monitoring Plan.
- c) The report shall include results and underlying data for impoundment seepage monitoring and soil nitrogen intervention protocol activities as required by the Division. The reports, except for

intervention protocol activity information, shall be prepared on the latest version of forms supplied by the Division. Quarterly Monitoring Reports shall be submitted to the Division no later than October 30, January 30, April 30, and July 30 of each year.

- d) The fourth quarter monitoring report shall include the following information, in addition to that required in Parts 9.b) and 9.c) above:
- i) The maximum number of swine that have been housed at each site during the previous 12 months.
 - ii) The estimated amount of total residual solids and swine feeding process wastewater generated in the previous 12 months (tons/gallons).
 - iii) The estimated amount of total residual solids and swine feeding process wastewater the permittee transferred to third parties in the previous 12 months (tons/gallons).
 - iv) The total number of acres of land application covered by the current swine waste management plan.
 - v) The total number of acres of land application sites that were used for application of residual solids and swine feeding process wastewater in the previous 12 months.
 - vi) A summary of all residual solids and swine feeding process wastewater discharges from the production area that have occurred in the previous 12 months, including date, time, and approximate volume.
 - vii) A statement indicating whether the current version of the swine waste management plan was developed or approved by a certified nutrient management planner.
- e) Any spill, unless the spill is considered to be “de minimis” per the provisions of Part I.B.4) of this permit, or contamination by a housed commercial swine feeding operation shall be reported immediately by telephone or electronic facsimile by the permittee to the Division and county health department for the county in which the housed commercial swine feeding operation is located,.
- i) Immediate notifications to the Division of spills and contamination shall be to:

Colorado Department of Public Health and Environment
24-hour Emergency Incident Reporting Line
Telephone: 1-877-518-5608

Written notification shall be submitted by the permittee so that it is received by the Division and by the appropriate county health department within 24 hours after any spill which is not considered to be “de minimis” per the provisions of Part I.B.4 of this permit, or any contamination occurs.

- ii) A written report must be submitted to the Division that describes the nature of any spill which is not considered to be “de minimis” per the provisions of Part I.B.4 of this permit, any initial action taken to clean up the spill, and any additional action that may be necessary to ensure that the spill does not result in permanent contamination of soils, surface water, or ground water. This report shall be submitted to the Division for approval no later than five working days after the spill occurs.
- iii) All required submittals shall be submitted to the Division at the following address:

Colorado Department of Public Health and Environment
Environmental Agriculture Program
DEHS-A2
4300 Cherry Creek Drive South

Denver, Colorado 80246-1530

- f) All reports and other information required by the Division shall be signed and certified for accuracy by the permittee in accordance with the following criteria:
 - i) In the case of corporations, by a principal executive officer of at least the level of vice-president or his or her duly authorized representative, if such representative is responsible for the overall operation of the facility from which the discharge described in the form originates.
 - ii) In the case of a partnership, by a general partner.
 - iii) In the case of a sole proprietorship, by the proprietor.
- g) All reports required by this permit, and other information requested by the Division shall be signed by a person as described above or by a duly authorized representative of that person. A person is a duly authorized representative only if:
 - i) The authorization is made in writing by a person described above;
 - ii) The authorization specifies either an individual or position having responsibility for the overall operation of the regulated facility or activity such as the position of plant manager, operator of a well or well field, superintendent, position of equivalent responsibility, or an individual or position having overall responsibility for environmental matters for the company. (A duly authorized representative may thus be either a named individual or any individual occupying a named position); and,
 - iii) The written authorization is submitted to the Division.
- h) If an authorization as described in this section is no longer accurate because a different individual or position has responsibility for the overall operation of the facility, a new authorization satisfying the requirements of this section must be submitted to the Division prior to or together with any reports, information, or applications to be signed by an authorized representative.
- i) The permittee, or the duly authorized representative, shall make and sign the following certification on all such documents:

"I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is to the best of my knowledge and belief, true, accurate and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."

PART II

A. PERMITTEE RESPONSIBILITIES

1. Duty To Comply

The permittee shall comply with all conditions of this permit. Any permit noncompliance constitutes a violation of the Colorado Water Quality Control Act and is grounds for one of the following actions: an enforcement action; permit termination, revocation and reissuance of the permit; a permit modification; or denial of a permit renewal application. Violation of the terms and conditions specified in this permit may be subject to civil and criminal liability pursuant to C.R.S. 25-8-601 through 612.

2. Minimization of Adverse Impact

The permittee shall take all reasonable steps to minimize or prevent any discharge in violation of this permit which has a reasonable likelihood of adversely affecting human health or the environment.

3. Proper Operation and Maintenance

The permittee shall at all times properly operate and maintain all facilities and systems of treatment and control (and related appurtenances) which are installed or used by the permittee to achieve compliance with the conditions of this permit. Proper operation and maintenance includes effective performance, adequate funding, adequate operator staffing and training, and adequate laboratory and process controls, including appropriate quality assurance procedures. This provision requires the operation of back-up or auxiliary facilities or similar systems only when necessary to achieve compliance with the conditions of the permit.

4. Reduction, Loss, or Failure of Treatment Facility

It shall not be a defense for a permittee in an enforcement action that it would be necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit.

5. Inspections and Right to Entry

The permittee shall allow the authorized representative of the Division, upon the presentation of credentials:

- a) To enter upon the permittee's premises where a regulated facility or activity is located or in which any records are required to be kept under the terms and conditions of this permit;
- b) At reasonable times to have access to and copy any records required to be kept under the terms and conditions of this permit and to inspect any monitoring equipment or monitoring method required in the permit; and
- c) To enter upon the permittee's premises, and any property which is used for land application of swine feeding process wastewater or residual solids which is not owned by the permittee, in a reasonable manner (in accordance with appropriate biosecurity procedures and protocols) and at a reasonable time to inspect and/or investigate any actual, suspected, or potential source of water pollution, or to ascertain compliance or non-compliance with the Colorado Water Quality Control Act or any other applicable state or federal rule, statute or regulation or any order promulgated by the Division. The investigation may include, but is not limited to, the following: sampling of any discharge and/or process waters, the taking of photographs, interviewing of any person having knowledge related to the discharge permit or alleged violation, and access to any and all facilities or areas within the permittee's premises that may have any effect on the discharge, permit, or alleged violation.
- d) The permittee shall provide notice to each landowner of property on which off site land application of swine feeding process wastewater or residual solids occurs of the Division's authority to enter and inspect premises pursuant to section 25-8-306, C.R.S.

The Division shall split samples taken by the Division during any investigation with the permittee if requested to do so by the permittee.

6. Duty to Reapply

The permittee shall submit a permit renewal application at least 180 days before this permit expires, unless the Division grants a later date.

7. Duty to Provide Information

The permittee shall furnish to the Division, within a reasonable time, any information which the Division may request to determine whether cause exists for modifying, revoking and reissuing, or terminating this permit, or to determine compliance with this permit. The permittee shall also furnish to the Division, upon request, copies of records required to be kept by this permit.

B. NOTIFICATION, REPORTING AND ADMINISTRATIVE REQUIREMENTS

1. Change in Discharge

The permittee shall notify the Division, in writing, of any planned physical alterations or additions to the permitted facility such that:

- a) The alteration or addition could significantly change the nature of, or increase the quantity of pollutants in the swine feeding process wastewater or residual solids; or
- b) The alteration or addition could result in a significant change in the swine feeding process wastewater or residual solids disposal practices, and such alteration, addition, or change may justify the application of permit conditions that are different from or absent in the existing permit, including notification of additional use or disposal sites not reported pursuant to an approved swine waste management plan.

The permittee shall give advance notice to the Division of any planned changes in the permitted facility or activity which may result in noncompliance with permit requirements.

Whenever notification of any planned physical alterations or additions to the permitted facility is required pursuant to this section, the permittee shall furnish the Division such plans and specifications which the Division deems reasonably necessary to evaluate the effect on the swine feeding process wastewater and residual solids, surface waters, or ground water. If the Division finds that such new or altered discharge might be inconsistent with the conditions of the permit, the Division shall require a new or revised permit application and shall either modify, or revoke and reissue, or deny the permit action in accordance with the procedures specified in Sections 61.5 through 61.6, and 61.13(5) of Regulation No. 61.

2. Noncompliance Notification

- a) If, for any reason, the permittee is or will be in violation of agronomic application rate requirements specified in this permit, the permittee shall, at a minimum, provide the Division with the following information:
 - i) A description of the cause of the violation;
 - ii) The period of violation, including the anticipated time when the operation will return to compliance; and
 - iii) Steps being taken to reduce, eliminate, and prevent recurrence of the violation.
- b) The permittee shall report instances of noncompliance which are not required to be reported within 24-hours at the time Quarterly Monitoring Reports are submitted. The reports shall contain the information listed in subparagraph (a) of this section.

3. Other Notification Requirements

Reports of compliance or noncompliance with, or any progress reports on, interim and final requirements contained in any compliance schedule in the permit shall be submitted no later than 14 days following each scheduled date, unless otherwise provided by the Division. The permittee's notification of all anticipated noncompliance does not stay any permit condition.

The permittee shall notify the Division, in writing, 30 days in advance of a proposed transfer of permit as provided in Part II.D.

4. Upsets

a) Effect of an Upset

An upset constitutes an affirmative defense to an action brought for noncompliance with permit effluent limitations if the requirements of paragraph (b) of this section are met. A determination on the claim that an upset occurred, independent of any enforcement action, is not separately a final administrative action subject to judicial review. It is only after the Division's decision that an upset has not occurred, that the Division may take an enforcement action. As used within this section, an upset is defined to be an exceptional incident in which there is unintentional and temporary noncompliance with permit effluent limitations because of factors beyond the reasonable control of the permittee. An upset does not include noncompliance to the extent caused by operational error, improperly designed treatment facilities, inadequate treatment facilities, lack of preventative maintenance, or careless or improper operation.

b) Conditions Necessary for a Demonstration of Upset

A permittee who wishes to establish the affirmative defense of upset shall demonstrate through properly signed contemporaneous operating logs, or other relevant evidence that:

- i) An upset occurred and that the permittee can identify the specific cause(s) of the upset;
- ii) The permitted facility was at the time being properly operated and maintained;
- iii) The permittee submitted proper notice of the upset as required in Part I.B.9., of this permit (24-hour notice); and
- iv) The permittee complied with any remedial measure(s) necessary to minimize or prevent any discharge or sludge use or disposal in violation of this permit which has a reasonable likelihood of adversely affecting human health or the environment.

c) Burden of Proof

In any enforcement proceeding the permittee seeking to establish the occurrence of an upset has the burden of proof.

5. Availability of Reports

Except for data determined to be confidential under Regulation No. 61 section 61.5(4), all reports prepared in accordance with the terms of this permit shall be available for public inspection at the offices of the Environmental Agriculture Program. Any information relating to any secret process, method of manufacture or production, or sales or marketing data which has been declared confidential by the permittee, and which may be acquired, ascertained, or discovered, whether in any sampling investigation, emergency investigation, or otherwise, shall not be publicly disclosed by any member, officer, or employee of the Water Quality Control Commission or the Division, but shall be kept confidential. Any person seeking to invoke the protection of this section shall bear the burden of proving its applicability. This section shall never be interpreted as preventing full disclosure of effluent data.

6. Submission of Incorrect or Incomplete Information

- a) Where the permittee failed to submit any relevant facts in a permit application, or submitted incorrect information in a permit application or report to the Division, the permittee shall promptly submit the relevant information which was not submitted or any additional information needed to correct any erroneous information previously submitted.
- b) Knowingly making false statements on any such report may result in the imposition of criminal penalties as provided for in Section 25-8-610 C.R.S.

7. Monitoring and Records

- a) If the permittee monitors more frequently than required by the permit, using approved test procedures or as specified in the permit, the results of this monitoring shall be included in the calculation and reporting of data to the Division.
- b) Records of monitoring information shall include:
 - i) The date, exact place, and time of sampling or measurements.
 - ii) The individual(s) who performed the sampling or measurements.
 - iii) The dates the analyses were performed.
 - iv) The individual(s) who performed the analyses.
 - v) The analytical techniques or methods used.
 - vi) The results of such analyses.
- c) The permittee shall retain for a minimum of five years records of all monitoring information, including all strip chart recordings for continuous monitoring instrumentation, all calibration and maintenance records, copies of all reports required by this permit, and records of all data used to complete the application for this permit. This period of retention shall be extended during the course of any unresolved litigation regarding the discharge of pollutants by the permittee or when requested of the Division.

C. MODIFICATION OR TERMINATION OF PERMITS

- 1. The filing of a request by the permittee for a permit modification, termination, revocation and reissuance, inactivation or a notification of planned changes or anticipated noncompliance, does not stay any permit condition.
- 2. All permit modification, termination, or revocation and reissuance actions shall be subject to the requirements of Regulation No. 61, Sections 61.5, 61.7, 61.8, 61.10 and 61.13(5), except for minor modifications.
- 3. This permit may be modified, suspended, or terminated in whole or in part during its term for reasons determined by the Division including, but not limited to, the following:
 - a) Violation of any terms or conditions of the permit.
 - b) Obtaining a permit by misrepresentation or failing to disclose any fact which is material to the granting or denial of a permit or to the establishment of terms or conditions of the permit.
 - c) Materially false or inaccurate statements or information in the permit application.
 - d) A determination is made by the Division that the permitted activity endangers human health or the classified or existing uses of state waters and can only be regulated to acceptable levels by permit modifications or termination.;

4. At the request of a permittee, the Division may modify or revoke and reissue a permit if the following conditions are met:
 - e) The Division finds that the permittee has shown reasonable grounds consistent with state statutes and regulations for such modification or termination.
 - f) Fee requirements of Section 61.13(5) of Regulation No. 61 have been met.
 - g) All public notice requirements have been met.

D. TRANSFER OF OWNERSHIP OR CONTROL

1. A permit may be transferred by a permittee only if the permit has been modified or revoked and reissued as provided in Section 61.8(8) of Regulation No. 61 to identify the new permittee.
2. A permit may be transferred to a new permittee if all of the following criteria are met:
 - a. The current permittee notifies the Division in writing 30 days in advance of the proposed transfer date.
 - b. The notice includes a written agreement between the existing and new permittee(s) containing a specific date for transfer of permit responsibility, coverage and liability between them.
 - c. The new permittee provides documentation of adequate financial assurance in conformance with the requirements of section 61.13(4)(h) of Regulation No. 61.
 - d. Fee requirements of Regulation No. 61, Section 61.13(5), have been met.

E. CONSISTENCY WITH OTHER LAWS AND REGULATIONS

1. State Laws

Nothing in this permit shall be construed to preclude the institution of any legal action or relieve the permittee from any responsibilities, liabilities, or penalties established pursuant to any applicable state law or regulation.

2. Property Rights

The issuance of this permit does not convey any property or water rights in either real or personal property, or stream flows, or any exclusive privileges, nor does it authorize any injury to private property or any invasion of personal rights, nor any infringement of state or local laws or regulations.

F. OTHER STANDARD CONDITIONS

1. Severability

The provisions of any part of this permit are severable. If any provision of this permit, or the application of any provision of this permit to any circumstance, is held invalid, the application of such provision to other circumstances and the application of the remainder of this permit shall not be affected and shall remain valid and enforceable. Failure to include an appropriate regulatory requirement in this permit does not relieve the permittee from liability should an applicable provision be omitted from this permit.

2. Fees

The permittee is required to submit payment of an annual fee and any applicable permit amendment fees as set forth in Regulation No. 61, Section 61.13(5). Failure to submit the required fee(s) when due and payable is a violation of the permit and shall result in enforcement action pursuant to Section 25-8-601 et. seq., C.R.S. 1973 as amended.

All attachments for the facility location and site maps, Swine Waste Management Plan, and other documents related to the permit application are available upon request.